

10-27-04

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Attorney Docket No: 46522 / 1101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Gary Dommer et al. (Pace Micro Technology PLC)

Serial No.: 10/085,489

Group Art Unit: 2173

Filed: 02/26/02

Examiner: John W. Cabeca

For: REPRESENTATION OF EPG PROGRAMMING INFORMATION

October 25, 2004
New York, NY 10022

MAIL STOP PETITIONS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**RENEWED PETITION UNDER 37 CFR 155(c) TO ACCEPT A
LATE CLAIM FOR FOREIGN PRIORITY**

Sir or Madam:

I write in response to the Decision on Petition Under 37 CFR 1.55(c), dated July 15, 2004, in which the Office rejected the form of applicant's Petition, filed May 2, 2003, requesting that a late claim for Foreign Priority be added to the files for the above-referenced patent application pursuant to 37 CFR 1.55(c). The Office determined that applicants had failed to identify in an oath or declaration the parent application to which priority was claimed, and failed to state that the entire delay between the date the claim under 37 CFR 1.55(a)(1) was due and the date the claim was filed was unintentional.

The deficiencies found by the Office in applicants' original Petition are addressed in the Declaration of Gregory P. Silberman, submitted herewith. The Silberman Declaration states that the instant application claims priority to a parent application filed in Great Britain in the name of Pace Micro Technology PLC, who is the Assignee of Record for the instant application. The parent application was filed on February 27, 2001, and was accorded application no. 0104781.0. A certified copy of the application as filed in the Great Britain Patent Office is attached to the Silberman Declaration as Exhibit A. The Silberman Declaration also states that the delay in notifying the Patent Office of the Priority claim was due to an inadvertent mistake in reviewing the documents that were filed with the instant application, and that the entire delay between the date the claim under 37 CFR 155(a)(1) was due and the date the claim was filed was unintentional.

Applicants respectfully request that the Office amend the instant application to claim the priority filing date of Great Britain Patent application no. 0104781.0, filed on February 27, 2001, by adding the following to the application:

“This application claims the benefit of Great Britain Patent Application No. 0104781.0, which was filed on February 27, 2001.”

Favorable action on this Renewed Petition is respectfully requested.

The Commissioner is hereby authorized to charge Deposit Account 50-0988 in the name of Kaye Scholer LLP for any amount associated with the filing of the original Petition or this Renewed Petition.

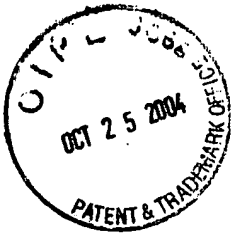
Respectfully submitted,



Gregory P. Silberman
Reg. No. 39,836

MAILING ADDRESS

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New York, New York 10022
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CERTIFICATE OF MAILING

(37 C.F.R. §1.10)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT DIVISION

Applicants:	Gary Dommer et al. (Pace Micro Technology, PLC))	October 25, 2004
)	
Appl. No.:	10/085,489)	Attorney Docket No. 46522-1101
)	
Filing Date:	February 26, 2002)	Group Art Unit 2173
)	
Title:	REPRESENTATION OF EPG PROGRAMMING INFORMATION)	Examiner: John W. Cabeca
)	

DECLARATION UNDER 37 CFR 1.131

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

I, Gregory P. Silberman, declare as follows:

1. I submit this Declaration in response to the Decision on Applicants' Petition Under 37 CFR 1.55(c), dated July 15, 2004. In that Decision, the Office rejected the form of applicant's petition, filed May 2, 2003, requesting that a late claim for Foreign Priority be added to the files for the above-referenced patent application pursuant to 37 CFR 1.55(c). The Office determined that applicants had failed to identify in an oath or declaration the parent application to which priority was claimed, and failed to state that the entire delay between the date the claim under 37 CFR 1.55(a)(1) was due and the date the claim was filed was unintentional.
2. The instant application claims priority to a parent application filed in Great Britain in the name of Pace Micro Technology PLC, who is the Assignee of Record for the instant application. The parent application was filed on February 27, 2001, and was accorded

application no. 0104781.0. A certified copy of the application as filed in the Great Britain Patent Office is attached hereto as Exhibit A.

3. The instant application was filed on February 26, 2002, within 12 months of the filing date of the Great Britain parent application.

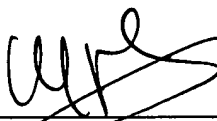
4. The delay in notifying the Patent Office of the Priority claim was due to an inadvertent mistake in reviewing the documents that were filed with the instant application. The entire delay between the date the claim under 37 CFR 155(a)(1) was due and the date the claim was filed was unintentional.

5. Applicants respectfully request that the Office amend the instant application to claim the priority filing date of Great Britain Patent application no. 0104781.0, filed on February 27, 2001, by adding the following to the application:

“This application claims the benefit of Great Britain Patent Application No. 0104781.0, which was filed on February 27, 2001.”

6. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

I declare under penalty of perjury under the laws of the State of New York that the foregoing is true and correct and that this declaration was executed on October 25, 2004, in New York, New York.



Gregory P. Silberman

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

THE PATENT OFFICE

A

27 FEB 2001

NEWPORT

The Patent Office

Cardiff Road
Newport
Gwent NP9 1RH

1. Your reference GW-G30940

2. Patent application number 27FEB01 E609282-5 D00346
(The Patent Office will fill in this part) P01/7700 0.00-0104781.0

0104781.0

3. Full name, address and postcode of the or of each applicant (underline all surnames) **Pace Micro Technology Plc**

Victoria Road
Saltaire
Shipley
BD18 3LF

127 FEB 2001

7588569001

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

England

4. Title of the invention **Representation of EPG Programming Information**

5. Name of your agent (if you have one) **Bailey Walsh & Co.**

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

5, York Place
Leeds
LS1 2SD

Patents ADP number (if you know it) 224001

6. If you are declaring priority from one or more earlier patent applications, give the and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number	Country	Priority application number (if you know it)	Date of filing (day / month / years)

7. If this application is divided or otherwise derived from an earlier UK application, the earlier application	Number of earlier application	Date of filing (day / month / years)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer "Yes" if:

- a) any applicant named in part 3 is not an inventor, or
 - b) there is an inventor who is not named as an applicant, or
 - c) any named applicant is a corporate body
- See note (d)

Yes

I certify this to be a true copy.

G. H. H. H.

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Continuation sheets of this form

Description 7

Claim(s)

Abstract

Drawing(s) 5 + 3

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Priority Documents

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Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)

Request for preliminary examination and search (*Patents Form 9/77*)

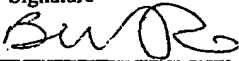
Request for substantive examination (*Patents Form 10/77*)

Any other documents
(Please specify)

11. I/We request the grant of a patent on the basis of this application

Signature

Date



26.02.01

12. Name and daytime telephone number of person to contact in the United Kingdom
G Wood
0113 2433824

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Representation of EPG Programming Information

The invention relates to the representation of information visually and particularly, although not necessarily exclusively, the provision of information in the form of programming information such as that provided as part of an Electronic Programme Guide (EPG). The invention relates to the format of the EPG display and particularly the provision of additional user choices which can be made from the display. Although the invention is described with reference to the EPG this does not and should not be interpreted as, limiting the scope of the invention.

An EPG is generated as a graphic interface on a display screen and is generated by a broadcast data receiver from data broadcast by and received from one or a number of service providers. The EPG can show a range of programme or function related information at least some portions of which can be selected by the user to obtain further information or to perform certain functions. The user typically navigates through the EPG by making a series of selections via appropriate control means, typically a remote control device. The use of the device and interaction with the broadcast data receiver (BDR) allows movement about the screen and through different display layers.

In this description the term "a level of choice" is used to refer to a menu option which is accessible by the user through navigation in the graphic user interface, "a level of select" is used to define the press of an action key on a control means such as a remote control device that executes the choice. A "user input device" is any control means provided to the user for control of the BDR, most commonly a remote control unit or the front panel keys, and "navigation keys" are the directional

keys on the user input device; such as Up, Down, Left, Right, Page up, Page down.

A conventional EPG presents the programming info with two level of user choice in a two dimensional space. (Time versus Channel, Channel versus Time, Theme versus Channel, etc). Normally the choices are mapped to x and y co-ordinates in a grid function on the screen and to the navigation buttons on the user input device. A change in x-co-ordinate, performed by operation of (left/right arrows) changes the user's choices in the y direction. Movement in the y direction (up/down arrows, page up/down) chooses a selectable program. This gives the user two levels of choice with one level of selection. The two dimensional grid with rows and columns, is one particular embodiment of this.

While this system allows beneficial and effective use of the two dimensional space, a limitation of this approach is the two dimensional graphic interface and the limited number of navigational keys on the user input device which can be used. When the user wants another view, he/she has to press another "menu-mapped" button on the remote control. There are two known methods to perform this function which are either to have remote control keys mapped directly to different pages of the EPG, such that depression of a particular key causes the generation of a particular EPG display and/or to have one button bring up a menu/list of all available menus of the EPG. In the latter of these opinions there is a need for an additional level of user selection before the desired list of choices is shown.

The aim of the present invention is to overcome the limitations of the two dimensional interface of the conventional EPG display to facilitate improved use of the EPG.

In a first aspect of the invention there is provided a graphics interface for display on screen and characterised in that the graphics interface has at least three navigational axes.

In one embodiment the graphics interface is used to generate an electronic programme guide (EPG) on a display screen.

By adding a third navigational axis and providing the user with the means to navigate along this axis using existing navigational keys, so a new range of user options can be selected from the single graphics display, thus eliminating the need for a separate interface to be generated and the need for an additional user selection.

In one embodiment each of the three axes are selectively navigable by the user via a user input device. Typically navigation along a selected axis allows a definable range of options to be selected, said option range indicated as part of the EPG display. Preferably the navigation along each of the axes can be achieved by use of conventional key selections on the user input device.

In one embodiment there is provided a z axis which is allocated to show, and allow selection of a range of, viewing options for the x and/or y axes.

By performing the invention so the amount of user choice is increased to three without increasing the select levels required to be performed by the user to select a particular programme.

Specific embodiments of the invention are now described with reference to the accompanying drawings wherein:-

Figure 1 illustrates in schematic fashion a conventional, prior art, display format;

Figures 2 and 3 illustrate stages of the current invention involving the use of navigation axes;

Figure 4 illustrates the expansion of a conventional EPG decision tree in accordance with the invention; and

Figure 5 shows an on-screen view of an EPG in accordance with one embodiment of the invention.

Referring firstly to Figure 1 there is illustrated the conventional approach to the format of an EPG display. In practice the screen view 2 is a part of a larger EPG graphics display page of information 4. When the user wishes to view another portion of the page, the directional keys move the view area 2 around on the page 4 as required by the user, in the x and y axis, 6, 8.

Now looking at the invention of this application, a third axis 10, is provided and this is used to extend the EPG information which can be selected into three dimensions. This is achieved by the decision to stack multiple pages 4, 12, 14 as shown in figure 2. Movement on the page 4 remains mapped to movement along the x- and y-axes, but there is now the additional option of movement between pages 4, 12, 14 and which movement is mapped to movement along the z-axis.

The visual representation of the z-axis can be added as an independent view of a row or column of choices (menu bar) 16 as indicated in Figure 3 as part of the display screen view and as shown in more detail in Figure 5. The movement in the z direction is indicated by movement of a cursor along the member 16.

To avoid the need for additional select levels, a separate set of keys can be mapped or re-mapped to control and provide movement options along the z-axis.

Movement in the z-direction changes the view of choices in the x-y plane, and movement in the x-direction changes the choices in the y-direction. As in a conventional EPG implementation, the lowest level of choice, choice of a specific program, is in the y direction.

The organisation of choices and data in a traditional EPG can be represented as a 2 level decision tree 20 as shown in Figure 4. A third layer of decision requires an additional level 22 in the tree as shown in figure 4. In this example, in an EPG, the chosen object will always be a channel. The objects of choice can be presented to the user in any graphic form (line, row, image, etc).

By indexing the EPG programming information rather than sorting, there is never a need to reorganise the information. If desired, the programming information can be stored in a flat unsorted array and the data is parsed and indexed as it comes in. The indexes are in turn mapped to the choices along the x-, y- and z-axes 6, 8, 10 respectively. Indexing rather than sorting decreases the necessity of resorting or having multiple copies of the same data

The representation of programming information in accordance with the invention eliminates the need for mapping remote control buttons to the user configurable keys. These keys can then be ignored, or removed, thus simplifying the remote control, or are used to allow access to other broadband services such as yellow pages, shopping, communication, etc.

For other graphics interfaces such as those used, for example, for broadband services the 3 layers of choice can be used to give the user faster access to the desired object within that service, and it should be appreciated that reference in this application to the display and utilisation of the invention can be repeated to advantage in any appropriate graphic user interface.

A specific example of the invention is described where an Electronic Programme Guide is visually represented as an almanac with a tab for each page, as indicated in Fig. 3. The tabs are placed vertically on the right hand side of the display and indicate motion and choices in the z-direction. The movement between pages is mapped to the page up and page down buttons on the user interface device. The arrow keys (left, right, up, down) are mapped to motion in the x-y plane as in a conventional EPG. In order to maintain the ability to scroll faster on a page, the action of continuous hold is mapped to an arrow button to fast scrolling. This replaces the need for using page up and page down for manoeuvring in the x-y plane.

All programming data is presented as lines in a column where motion in the x-direction changes the content of the column and motion in the y direction moves the cursor up and down between available programs.

In the mapping of the EPG data to the three dimensional space the axes are mapped in the following manner:

Z = Page	= Sorting method/programme type
Y = Column	= Sort index
X = Line	= Programme

The settings can also be adapted so that, for example, for another form of graphics interface such as a display for service access and payment facilities with three layers of choice, the x, y and z co-ordinates can be mapped this way:

Z = Page	= Settings group (Payment, output, parental control, etc)
Y = Column	= Setting (Method of payment)
X = Line	= Options for setting (credit card, direct withdrawal, bill me)

Traditional EPG

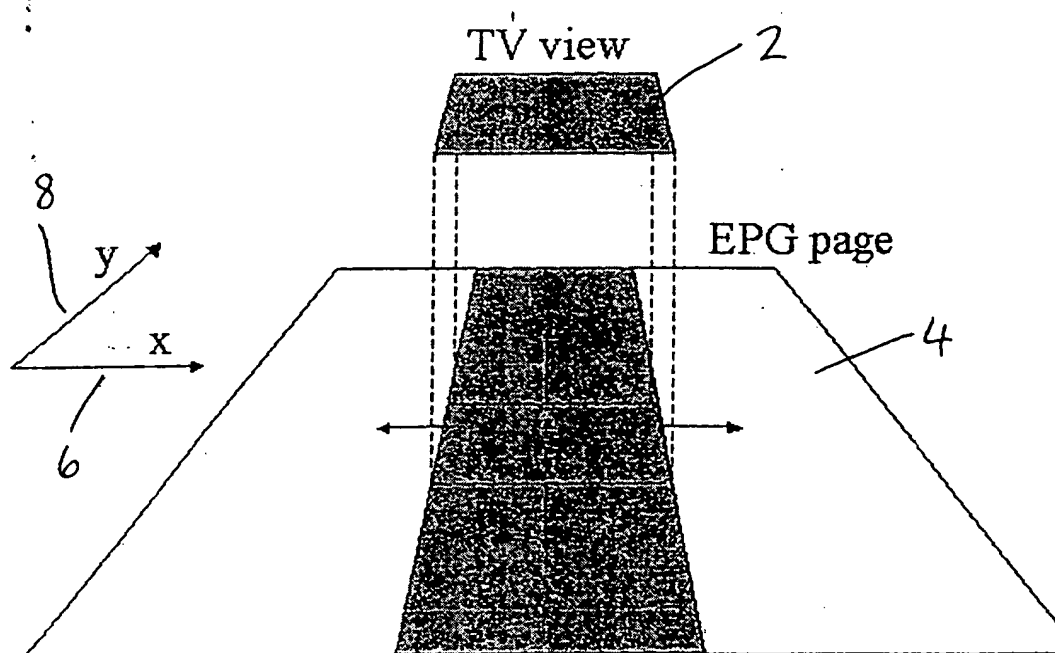


Figure 1

Organization of programming information in three dimensions

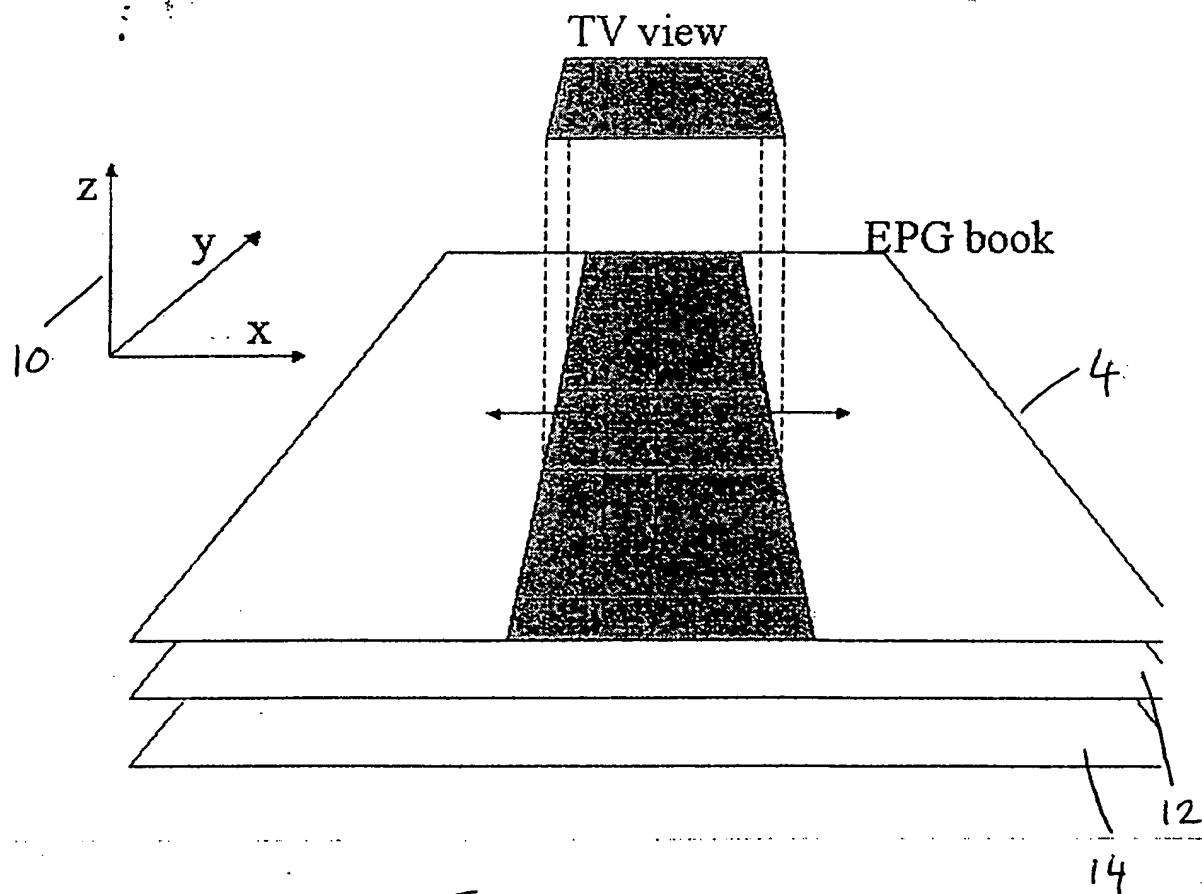


Figure 2

Mapping z-axis to user input device

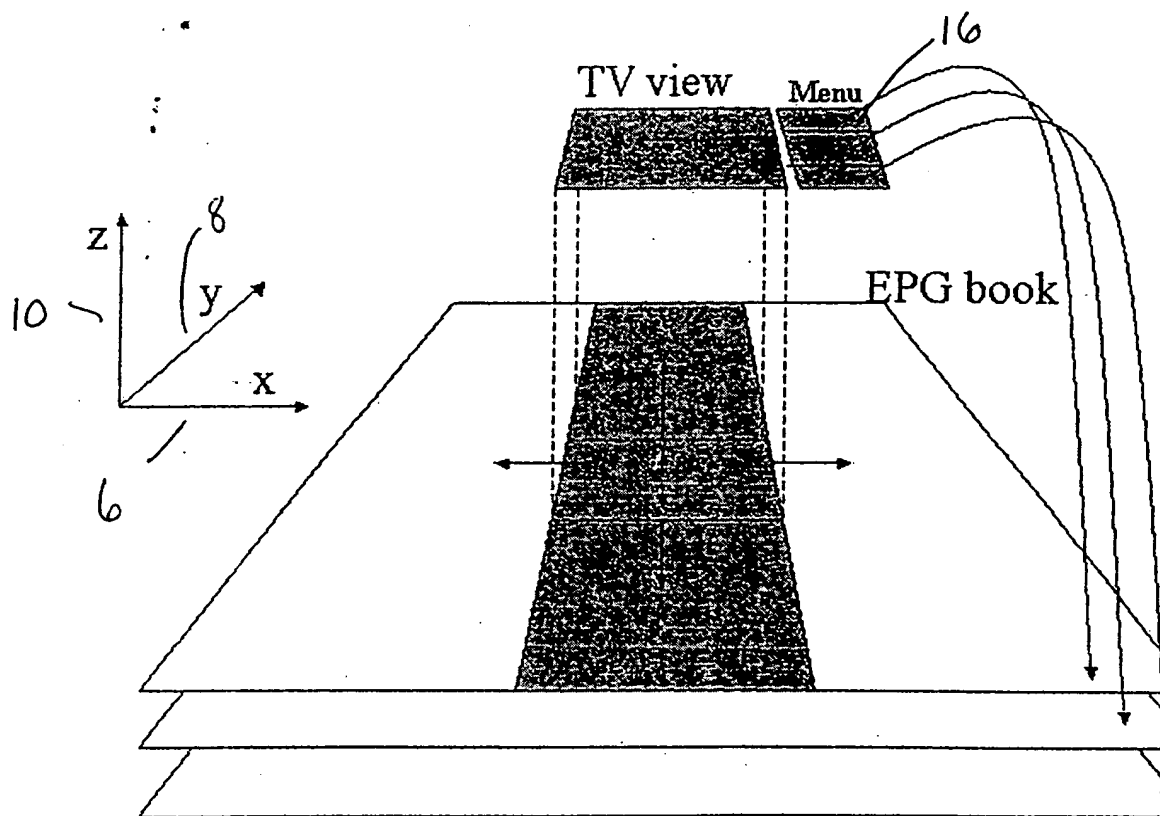


Figure 3

Mapping the data for three levels of user choice

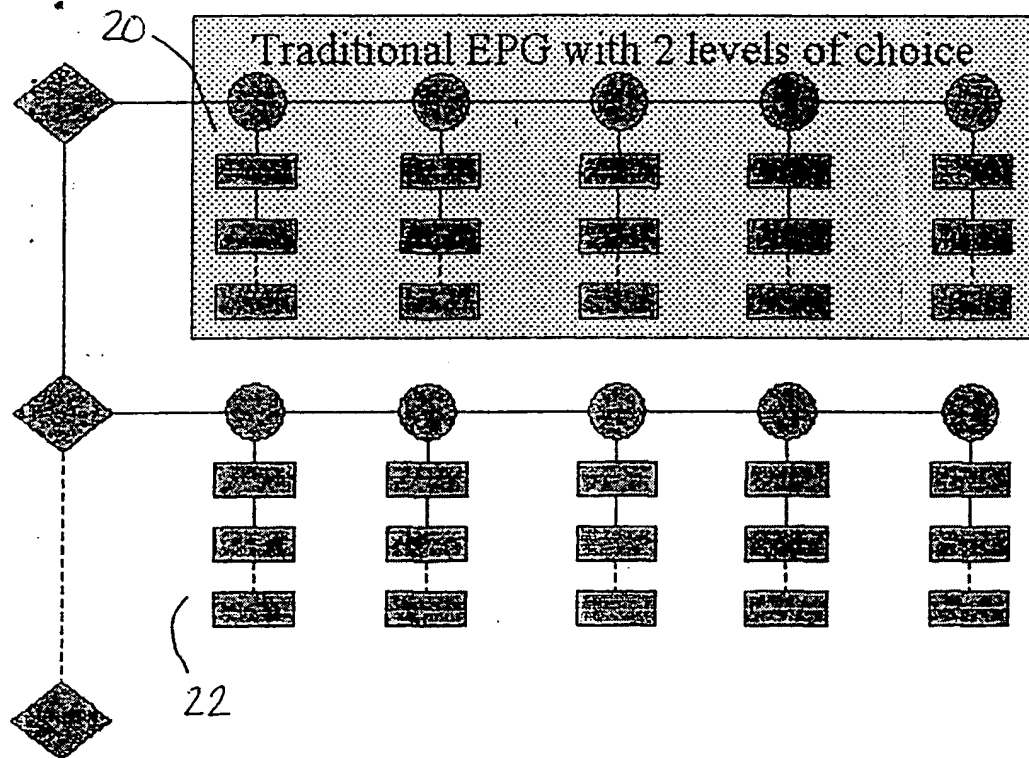


Figure 4

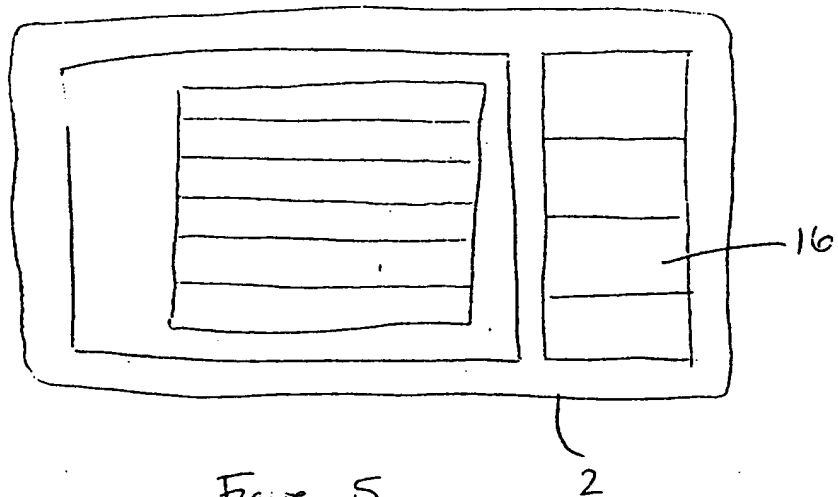


Figure 5

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